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REGULATION AND REFORM OF THE FINANCIAL SECTOR IN INDIA: AN ANALYSIS OF THE UNDERLYING INCENTIVES

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ABSTRACT: This paper analyzes the incentives faced by the various agents under the highly regulated banking environment in India prior to 1992 and uses it to provide an explaination of the various problems facing the Indian banking system. It then describes the financial sector deregulation initiated by the Indian government since 1992 and analyzes the new incentives that are likely to arise as a result of financial deregulation. Using this analysis the paper explains the causes of financial crises that followed rapid financial deregulation in nearly a dozen countries. While highlighting the dangers of rapid financial deregulation, the paper explains how to deregulate the banking sector in India safely and successfully through a controlled, cautious and gradual approach to deregulation.

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REGULATION AND REFORM OF THE FINANCIAL SECTOR IN INDIA: AN ANALYSIS OF THE UNDERLYING INCENTIVES

1. INTRODUCTION

A well-functioning and efficient financial system is important for promoting rapid industrial development in a market economy. By providing relatively liquid assets with reasonable returns on savings, it encourages people to save and keep their savings in the form of financial assets. Through intermediation of the financial system, these savings are routed to firms for undertaking investments. The financial system pbols savings and distributes risks of investments across large number of people, thereby making possible large investment projects that may not have been undertaken otherwise. By providing loans to new entrepreneurs, it supports innovation, creativity and a more equitable income distribution, while at the same time creating a larger entrepreneurial base for faster industrial development in the future. By providing loans to buyers, if stimulates demand for industrial goods. Thus, the more efficient the financial system of an economy, the higher would be the investment rate; and hence the output and employment growth rates of the economy.

The banking sector is the most important part of the financial system in developing countries like India, and the focus of study in this paper. The banking sector in India has remained highly regulated since banks were nationalized in 1969, whether it be in interest rates, loan allocations, or the setting up of new banks by private entrepreneurs. The nationalization of banks helped to provide an initial thrust to the development of banking, especially in rural areas, and increased access to credit for farmers, small firms, and weaker sections of the society. However, unfortunately it has also stifled competition in the banking sector, leading to inefficient resource use and poor customer service. Similarly, directed lending to 'priority sectors' at concessional rates of interest artificially swelled demand for such loans, some of it from take borrowers. Ceilings on interest rates have created credit shortages leading to corruption in sanctioning loans.

At the same time, deregulation or reform of the banking sector can unleash its own problems. For example, simultaneous deregulation of interest rates and loan portfolio requirements can create such huge credit demands from the previously credit-starved sectors that interest rates can rise to very high levels for some time. This can lead to a large number

of firms going bankrupt and can eventually snowball into a major industrial recession causing a banking crisis (due to non-recovery of loans from the bankrupt firms) as has happened in a large number of counties in Latin American, Asia and elsewhere.

This paper examines the consequences of a highly regulated banking environment in India by analyzing the incentives and forces it creates for various agents in the economy (Section 2). The paper also describes the banking deregulation and reform that is presently being considered by the Indian government (Section 3). It analyzes the new incentives that are likely to arise as a result of deregulation and highlights. the dangers of rapid banking deregulation by drawing upon the experience of nearly a dozen other countries (Section 4). Using these results, the paper then tries to explain how to deregulate the banking sector in India safely and successfully (Section 5). Finally, the main conclusions of the paper are summarized (Section 6).

2. REGULATION OF THE BANKING SECTOR IN INDIA: SOME CONSEQUENCES

Since the nationalization of banks in 1969, the banking sector in India has been heavily regulated. This section explores the incentives created by these regulations and their economic impact. The focus will be on the following regulations:

(1) Entry restrictions on private banks.

(2) Credit allocation requirements, including the priority sector lending requirements and the statutory liquidity requirement (SLR).

(3) Interest rate controls.

What each of these restrictions stipulated, why they were imposed and what were their consequences will be discussed next.

2.1 Entry Restrictions on Private Banks

Since 1969 the entry of private banks to the Indian markets has been restricted. Permission of the Reserve Bank of India is required for starting a new bank or even for opening a new branch of an existing bank. Foreign banks were allowed to operate only a limited number of branches and foreign equity participation in domestic banks was not permitted. These restrictions have been eased since reforms were initiated in 1992 in older to stimulate competition.

The entry restrictions on private banks were imposed following the nationalization in 1969 of the major commercial banks to prevent "unfair" competition from private banks. The criticism against private banks in 1969 was that they were mainly operating in urban areas and mostly lending to the rich individuals and the well-established firms. The nationalization was indeed followed by major expansion of nationalized banks in rural areas and government directed lending to weaker sections of the society, such as farmers and small scale industries, at subsidized interest rates.

However, an important side effect of the nationalization has been the virtual elimination of competition among banks. The Reserve Bank'began enforcing uniform interest rates, spreads, and service charges among nationalized banks on equity grounds. Even when the Reserve Bank directives allowed some scope for variation in interest rates, the nationalized banks tended to avoid competing with each other, perhaps because bank management gained little from increasing their market share. Further, the private banks were small (the larger one's having been nationalized) and faced the prospect of being nationalized if they grew beyond a certain size. Thus, until 1991, there were limited incentives for existing small banks to try to grow rapidly or for entrepreneurs to start new private banks.

The lack of competition either among the public banks' or between the public **and** private banks, combined with labor policies of the public sector where employees' salaries and promotions were not significantly linked to their job performance, has led to a steady decline in the efficiency and work culture of the banks and an alarming decline in the quality of customer service. Another symptom of this lack of competition was that most banking operations were not computerized until 1991. In the absence of competition, bank managers have had no incentive to improve the efficiency of operations or customer service. Further, **fearing** job losses, workers have opposed computerization. Some gradual steps towards computerization have been initiated recently following the reforms since 1992.

2.2 The Credit Allocation Policy

The allocation of bank credit in India is largely determined by the State through the Cash Reserves Requirement (CRR), the Statutory Liquidity Requirement (SLR) and the priority sector lending requirement. For example, in 1991, banks lent to the government 49 percent of their total deposits at concessional rates through the CRR and SLR. Of the

rcmaining 51 percent, 40 per cent had to be lent to the priority sectors again at concessional rates. In addition, there were further requirements to lend to the exporters and food procurement programs at concessional rates. As a result, only about 25 per cent of the bank deposits were left to meet the needs of all rhe remaining sectors, the allocation of which was determined by market forces (see Table 1). What each of these requirements states is briefly described next.

2.2.1 The Cash Reserve and Statutory Liquidity Requirements

The Cash Reserve Requirement (CRR) obligates banks to hold a certain fraction of their total deposits as reserves with the Reserve Bank. This requirement has hovered around the statutory maximum of 15% since late 1980s. The purpose of these reserves is to ensure the liquidity of banks. However, they also impose a significant cost on the banks since the interest received on the reserves is low (5% per annum). While all banking systems require banks to hold some reserves, the magnitude of reserve requirement is relatively high in India. For comparison, the reserve requirement is 8 percent or less in most East Asian counties (Korea, Singapore, Taiwan, Singapore) and only about 2-3 percent in most developed countries.

The Statutory Liquidity Requirement (SLR) stipulates that banks must invest a certain fraction of their total deposits in government, or government approved, securities which **typically** carry below market interest rates. Since late 1980s, this requirement for Indian banks has been about 38 percent of their total deposits. While ostensibly, this is required to ensure the safety and liquidity of the banks, it is in fact used as a means to divert the bank deposits of the households to finance the government budget deficits and other credit needs of the public sector at subsidized interest rates. Table 2 shows that the preemption of bank deposits by the government through the SLR and CRR has tended to increase in tandem with the government's fiscal deficit. Table 3 shows data on the percentage of domestic credit going to the central government in India and several East Asian counties. The Table shows that this ratio is relatively high for India, pointing to the high SLR on banks in India.

The high CRR and SLR requirements reduce the availability of credit to the private sector. The low interest rates on CRR and SLR implicitly tax the banking sector. The banks, in turn, pass the burden on to their customers in the form of lower interest rates on deposits

and/or higher inreresr rates on loans to the private sector.

2.2.2 Directed Lending

After banks have satisfied the SLR and CRR, they were obligated to lend a certain fraction of *the remaining* funds to the so called "Priority Sectors" (mainly agriculture and small scale industries) as directed by the Reserve Bank. Since the early 1980s, Indian banks have been required to lend 40 percent of their total loans (after satisfying the SLR and CRR) to these sectors. In addition, there has been an informal requirement to provide liberal credit to exporters. In 1993 this requirement was formally fixed at ten percent of total loans. Foreign Banks had lower directed lending requirement at 15 percent until 1994. In 1994 this was revised to 32 percent (inclusive of export credit). Effectively, therefore, even after meeting the CRR and SLR requirements, about one half of the remaining credit of the domestic banks, is directed.

The purpose of the priority sector lending has been to increase the proportion of credit going to the sectors which are important to the national economy with regard to their contribution to growth, employment generation, and/or equal income distribution, and which may not receive adequate credit otherwise. These objectives are desirable and have been achieved to some extent. However, by the way the policy has been implemented, many undesirable incentives have been created leading to many problems and costs, as follows:

(a) Political control of public sector banks and the consequent lobbying by various pressure groups- has resulted in loans, especially those to the priority sectors, being given without adequate safeguards against defaults and a lax attitude towards enforcing repayment. These, together with widespread mismanagement and corruption in public sector banks, have resulted in large loan arrears (see, for example, the Narasimham Committee Report, 1991, Chapter IV and Ministry of Finance, 1993). Ministry of Finance (1993) estimates that 21 per cent of the loan advanced by public sector banks are non-performing. Private estimates are even higher.

(b) The prionty sector loans were typically given at concessional interest rates (see Table 4). This, together with inadequate safeguards against default, created incentives to borrow

under priority sector loans as far as possible, and sometimes led to cheating to qualify. A significant proportion of loans was usurped by those for whom it was not intended. For example, concessional loans and other benefits to the small scale industry has led many larger firms to either sub-divide their operations in small fragments or to under-report their capital assets in order to qualify for priority loan for small scale industry[2]. In some cases, 'ghost firms' have been created for the sole purpose of getting the concessional loans[3].

(c) Loans taken by qualified agents may not always be used for the intended purpose due to the fungibility of funds. For example, a farmer may take a concessional loan for buying a tubewell but use his own funds for buying a television. Assuming that in the absence of concessional loan, he would have bought the tubewell from his funds, the priority sector loan actually finances the purchase of the television.

(d) The priority sector lending helps the reiatively better off groups within the priority sector. For example, the wealthiest farmers and largest of the small scale firms often comer most of the priority sector loans. This happens because the wealthier farmers and larger firms are likely to have better social and political connections, be more credit-worthy and involve smaller transaction cost as a proportion of the amount lent than poor farmers and small firs. The former groups are also more likely to avoid repaying the loans by using their connections to put pressure on banks.

(e) The concessional priority sector lending imposes a burden on the rest of the borrowers and the depositors since the banks pass on the cost of subsidizing the priority sector lending to them by offering tower interest rates on deposits and charging higher interest rates on non-priority sector loans. The non-priority sectors are also faced with reduced credit availability.

Thus the social benefits of priority sector lending have proved to be smaller and costs higher than originally expected.

2.3 The Interest Rate Controls

Since 1969 the interest rates in India have been set by the Reserve Bank. Generally,

these interest rates, especially on directed lending to government and priority sectors, have been lower than the market clearing level. This has been justified on the ground that it will stimulate investment (see, for example, Keynes, 1936). However, as McKinnon (1973) and Shaw (1973) argue, keeping the interest rates artificially low may result in reduced and less productive investment. Their basic argument against interest rare ceilings is illustrated in Figure 1. When the supply of deposits and demand for loans are as depicted in Figure 1, the loans market clears at the interest rate r_0 with I_0 amounts of funds being loaned out for investments. When an interest rate ceiling of r_C is imposed,'interest rates on deposits also go down and many people may save less or divert some of their savings to inflation hedges such as gold *or real* estate. Thus, the supply of bank deposits goes down to I_C and since less funds are available to be loaned out, the investments must decline from I, to I,.

Furthermore, when the interest rate ceiling r_C prevails on loans, those with investment projects with return between r_C and r_0 will also seek and receive loans since banks have an incentive to discriminate between borrowers only on the basis of their credit worthiness, not the productivity of their investments. Thus, the average productivity of investments will decline as a result of the interest rate ceiling. This, together with the decline in investments from I_0 to I,, implies that, ceteris paribus, the rate of growth of the GNP will also decline.

For empirical evidence regarding these issues, see, for example, World Bank (1989, Chap. 2), Fry (1988), Gelb (1989) and Worid Bank (1993). The World Bank (1989, Table 2.3, p.31) shows data based on a sample of eighty developing countries. The countries are subdivided into three groups according to their real (adjusted for inflation) interest rates: positive, moderately negative (0 per cent to -5 per cent) and strongly negative. The second and third groups are much more likely to have interest rate ceiling. The Table shows that the first group had deeper financial sectors (that is, higher M2/GDP ratio), moderately higher investment rates, and significantly more productive investments (that is, larger change in GDP/investment) than the other two groups. Fry (1988) and Gelb (1989) run ordinary least squares regression of GDP growth on real interest rates using pooled cross economy time series data. They find a positive association between GDP growth and real interest rates. However, more recently, World Bank (1993) has provided evidence that a clear positive association between GDP growth and real interest rates exists only for economies with negative real interest rates. This is consistent with the arguement advanced in Section 4 that

very high interest rates are harmful to the economy.

Arguments such as those advocated by McKinnon (1973) and Shaw (1973) have led many economists to advocate financial liberalization, that is, market determined interest rates and credit allocation, *along* with privatization of banks. The financial liberalization initiated in India since 1992 is discussed next.

3. BANKING DEREGULATION IN INDIA SINCE 1992

Financial deregulation has been recommended for India by the government appointed Narasimham Committee (1991). The Committee recommended the dismantling of barriers to the entry and expansion of private banks, sharp reduction in directed credit and gradual decontrol of interest rates. Details of the recommendations and reforms initiated so far are discussed below:

3.1 Dismantling Barriers to Entry and Expansion of Private Banks

In order to increase the efficiency and quality of service of the nationalized banks, the Narasimham Committee recommended that the banking industry be made more competitive by removing restrictions on entry and expansion of private banks, and reducing those on the expansion of foreign banks. The Committee also called for an assurance by the government that no new banks would be nationalized. The Committee recommended that new private banks should be required to have a minimum initial capital of one billion Rupees, joint ventures between foreign and Indian banks should be permitted, with foreign banks allowed up to 20 percent equity. The Narashimam Committee also recommended that prudent supervision and regulation of the banks should be undertaken by the Reserve Bank. New capital adequacy norm of 8 percent of risky assets has been recommended for banks, to be achieved over the next few years. New accounting norms were also prescribed for banks regarding the classification of non-performing loans.

These recommendations were accepted by the government in April 1992. In a bid to restore health to the bank balance sheets, and eventually sell part of their equity to the public, the government has infused large amounts of capital to the public banks to help write-off the non-performing loans. From April 1992 to March 1995, the total capital infusion equaled Rs 110 billion or about 10 percent of the total bank credit outstanding in 1992 (see Table 1).

Further, ten new foreign bank branches and ten new domestic private banks had been granted license to operate by early 1995. However, of the ten domestic private banks granted license, only six had actually commenced banking operations. Further, the new domestic banks have only a few branches each and are mostly operating in the major cities and aiming at the upper segment of the clientele and at the corporate customers. This may indicate that their may still be reservations in the private sector about the viability of private banks and confidence in the government policy of competition between private and public sector banks may be lacking. Perhaps the minimum initial capital requirement of one billion Rupees is also too high.

3.2 Deregulating Credit Allocation

Narasimham Committee (1991) also recommended reducing state intervention in credit allocation. Specifically, it recommended that priority sector lending be reduced from 40 per cent to 10 per cent over a three year period. Simultaneously, it called for the institution of preferential refinancing by the Reserve Bank of credit to most of the better off sectors previously falling under the priority sector. Further, it recommended cutting the SLR requirement from 38.5 percent to 25 percent over a three year period and payment of market interest rates on such borrowings.

The government has accepted the recommendation to cut SLR, although it is being phased in at a slower rate than recommended; SLR was reduced to 33.75 percent. in September 1993, and to 31.50 percent in september 1994 with a marginal rate of 25 percent for deposits beyond the ievel reached in September 1994, The interest rates on borrowings under SLR has also been increased to near market rates.

However, the government has not accepted the recommendation to reduce priority sector lending because of strong opposition voiced by the small scale firms and farmers who are the main beneficiaries of priority sector lending. These groups, including their employees and dependents, account for almost 75 percent of the population and therefore carry great political clout. However, since 1993 the interest rates subsidy on such loans has been significantly reduced. Eligibility norms for priority sector loans have also been relaxed to make it available to firms with a capital base of up to Rs 7.5 million compared to Rs 3.5 million previously (this makes it easier for the banks to meet the priority sector lending requirement).

3.3 Decontrolling Interest Rates

The Narasimham Committee recommended a cautious move toward market determined interest rates as a medium term objective while correctly warning against allowing interest rates to rise much as they already were on the high side (for the non-priority sectors).

The government has accepted these recommendations and began to move gradually towards this goal. Interest rates on deposits were deregulated in 1993, with each bank free to set it's own rates on deposits of various maturities, subject to a ceiling, currently set by the Reserve Bank at 11 percent per annum. In October 1994, interest rates on loans for amounts in excess of Rs 200,000 were also deregulated. Interest rates on smaller loans continued at the subsidized rate of 12 percent for loans smaller than Rs 25000 and 13.5 percent for loans in amounts between Rs 25000 and Rs 200,000. This compares with a prime lending rate of 16 percent (April 1995) for loans of over Rs 200,000.

Banking deregulation is expected to result in improved efficiency, better service to customers, as well as increased and more productive investments, and a higher growth of national income. However, it also needs to be handled very carefully. Whar can go wrong with rapid banking deregulation when the incentives it unleashes are not well understood is considered next.

4. DANGERS OF RAPID BANKING DEREGULATION

Most of the countries thar have attempted financial liberalization have also experienced a financial crisis - failure of several banking institutions and/or accumulation of a large percentage of non-performing loans by the banking sector, typically exceeding 20 per cent of their loans portfolio[4]. The experience with financial liberalization has been so disastrous in many countries because the incentives unleashed by liberalization were not well understood.

The financial liberalization experience of about a dozen countries from Latin America (Argentina, Chile and Uruguay), East Asia (Indonesia, Korea, Malaysia and Philippines) and elsewhere (Australia, New Zeaiand, Turkey, USA) is discussed next. Most of these countries, except Korea, Malaysia and the Philippines, rapidly deregulated the interest rate controls on banks. Usually this was also accompanied by significant and rapid reduction in directed lending and reduction or elimination of credit ceilings on specific sectors or firms. Some of

these *liberalizing* countries namely, Chile, Argentina, Uruguay, Philippines and Turkey -- experienced major crises requiring intervention by the governments to bail out the insolvent banking sectors. In Chile, the central bank holding of bad loans amounted to 19 per cent of GNP in 1988, and in Uruguay, to 7 per cent of GNP in 1983. In Turkey the cost of rescuing the insolvent banks was estimated co exceed 10 per cent of GNP. In the Philippines 30 per cent of bank loans were non performing in 1987. In most other crises countries also, the non-performing loans were typically in excess of 20 per cent of total loans portfolio of the banking sector.

Table 5 shows that most of the countries experiencing financial crises experienced a sharp increase in the interest rates, often exceeding 8 per cent in real terms. In the Latin American countries and in the Philippines, the real interest rates exceeded 25 per cent in real terms. While some increase in the real interest rates was only to be expected following financial liberalization, the kind of increases actually experienced were phenomenal, at least in major crisis countries (except Turkey). These real interest rates easily exceeded the real marginal productivity of capital in most countries. For example, the real rates of return on total capital for 1960-80 were estimated to be only 5.18 percent for the USA'. What was the cause of these very high real interest rates ? To what extent were they contributing to the financial crisis? These questions can be answered by analyzing the incentives unleashed by a sudden liberalization of the interest rates and credit portfolio restrictions on banks.

4.1 Causes of High Real Interest Rates Following Banking Deregulation

The main causes of high real interest rates following banking deregulation are as follows:

(a) Pent up demand for credit from sectors previously denied access to credit can lead to a large upsurge in the demand for credit, and hence the interest rates, for the first few years following liberalization. Prior to financial liberalization, in most countries listed in Table 5, the banking credit was selectively directed by their governments into preferred sectors such as small scale industries, exporting firms, and public sector firms. At the same time, the credit demands of some of the non-preferred sectors were not fully met. These often included loans for the purchase of equity shares, consumer durables, and in some cases, housing and real-

estate. In this kind of situation, when government controls on credit allocation and interest rates are suddenly released, the credit - starved sectors try to achieve their desired "stock" of credit as quickly as possible. In the process; they can create huge "flows" of demands for credit[6] in the short run, which typically lasts for a few years. During this period, the total demand for credit can increase very sharply resulting in a sharp increase in the interest rates.

Figure 2 shows that the interest rates tend to exhibit an overshooting or "inverted J" pattern after liberalization. Starting from an initial credit demand D_o and interest rate-ceiling r_c, financial liberalization leads to the demand for credit shifting to D_1 and the market interest rates rising sharply to r_1. Once the pent up demand for credit is satisfied and the desired stock of credit is reached, the additional demand for credit from the previously credit starved sectors will largely decline, and the total credit demand will decline to something like D_2, resulting in the interest rates declining to r_2. Thus, following liberalization, there will be a tendency for the interest rates to shoot up sharply in the short run and then decline. This pattern was evident in virtually all the countries considered as can be seen from Table 5 and Figure 4.

(b) Large credit flows to meet the pent up demand for credit from share markets, real estate and consumer durables can lead to sharp price increases in these sectors; this further fuels the demand for credit to invest in these sectors and puts further upward pressure on the interest rates. For example, if bank credit becomes available for purchase of shares in companies, many individuals who were previously unable to purchase their desired amount of shares due to a liquidity constraint will now be able to do so. As a result, the demand for shares and hence their prices can rise sharply (occasionally this may be delayed until market sentiments turn bullish). When the share prices increase sharply, the real expected return on shares – given by the growth rate of share prices in real terms plus the dividend rate -- also increases sharply and may even reach levels above 25 percent or, in some cases, 50 percent. For example, after the Chilean banking deregulation in 1975, *real*[7] share prices nearly quadrupled over the period 1975-80 (see Figure 5). These high returns induce many additional individuals to invest in share markets. This lead to additional demand for bank credit even at exorbitant interest rates. This additional demand for credit at high real interest rates can keep the interest rates high for some time. As the pent up demand for credit from the

previously liquidity constrained investors is satisfied, the additional demand for shares declines after some time, leading to a decline in the price of shares.

This is illustrated in Figure 3: the pre-liberalization demand for shares is D_o and the real share price index is at P_o. As credit flow increases after liberalization, the demand for shares shifts to D_1 and the share prices rise sharply to P,. When the pent up credit demand for shares is mostly satisfied, the demand for share declines to say D_2 and the share prices collapse to P_2. Thus, the share prices too will tend to exhibit an overshooting or "inverted J" effect in countries where interest rates and restrictions on borrowing are liberalized. Figure 5 shows the real[7] share price indices for Australia, New Zealand, Chile, Malaysia and Philippines*. All of these countries show the "inverted J" pattern of share prices.

A similar pattern is likely to be repeated in the housing/ real estate market.

(c) If the inflation rate in the country is high and volatile, real interest rates on loans can become very high simply. because of the high risk involved in lending and borrowing in nominal terms. Table 6 shows the spread between lending and deposit rates for selected low inflation (the inflation rate below 5% on average), high inflation (the inflation rate between 20 and 100%) and hyper inflation (the inflation rate above 100% on average) countries. It is seen that while the average spread is only 3% for the low inflation countries, it increases to 13% for the high inflation countries and to a whopping 158% for the hyper inflation countries. With spread as high as this, very high real interest rates on loans are nor surprising. All of the major crisis countries, Argentina, Chile, Uruguay, Philippines and Turkey, were either high or hyper inflation countries.

(d) Monetary contraction sometimes accompanies financial liberalization in an effort to reduce inflation rate, as for example was the case in USA, Turkey and Philippines. However, a monetary contraction reduces the supply of hank credit at a time when the demand for credit is likely to be increasing due to the liberalization. This contributes to the phenomenon of high real interest rates following liberalization.

To summarize, the interest rates can become very high for a few years following financial liberalization due to pent up demand from previously credit starved sectors, due to

excessive increases in prices of, for example, shares and real estate, due to high and unstable inflation rates and due to a monetary contraction. These high real interest rates are temporary, except perhaps in countries suffering from high and volatile inflation, and do not represent the true long run equilibrium interest rates. Their effects on the economy can be highly debilitating though, as will be discussed next.

4.2 Consequences of High Real Interest Rates Following Banking Deregulation

A sharp increase in interest rates can lead to financial crisis, that is, excessive build up of non-performing loans and bank insolvencies. This can happen through one or more of the following processes.

(a) Previously undertaken investments financed by debt can become inviable following sharp and unexpected increases in interest rates. In most developing countries, a large majority of firms depend on bank debt and other corporate debt instruments to finance their investments. When the interest rates suddenly increase, many of these firms, which had based their investment decision on the expectation that the interest rates will stay close to the pre-liberalization levels, find themselves stuck with investments whose yieids are not commensurate with the sharply increased cost of servicing the debt. Thus many of these firms face difficulties and may eventually fail. An industrial recession resulting from the sharp increase in interest rates and/or other factors, further exacerbates these difficulties. The firms' inability to service and/ or repay their debt, leads to a build-up of non-performing Ioans for the banks.

(b) High interest rates can significantly increase the risk involved in lending. This is due to the fact that the relatively safe borrowers with low risk but also lower expected returns may find the interest rates too high for the returns they expect to make and may drop out of the loan market, whereas the relatively risky borrowers with investment projects which have higher average returns but also higher risks of failure, remain in the loan market. The risky borrowers remain because if their projects succeed, they keep most of the benefits while the bank simply gets back its loans. If the project fails, the investors walk off leaving the bank to pick the pieces. Even when the banks have collateral (usually the equipment bought with

the loan) they may not be able to fully recover their loans because of the expensive and time consuming litigation involved in liquidating collateral and the deterioration/ lack of proper maintenance/ theft of the collateral in the 'mean time'. Also, the banks are likely to be inexperienced in evaluating the risk under the rapidly changing economic scenario that often accompanies financial liberalization. These factors again contributes to the banks' non performing loans portfolio.

(c) The overshooting effect in share and real estate prices *can bankrupt many speculative* borrowers. As discussed *in* Section 4.1, financial liberalization often leads to sharply increasing prices of shares and real estate for a few years, inducing many individuals to invest or speculate in these markets with funds borrowed from banks at high real interest rates. When the prices later decline, many of these individuals become insolvent and are unable tn repay their loans. leaving the banks with a considerable portfolio of non-performing loans. (The collateral, typically the shares or real estate bought with the loan, may lose so much value that large losses still accrue to banks.)

(d) Sudden and unexpected increases in the lending and deposit rates can create severe difficulties for financial intermediaries which do not have balanced term structure between their deposits and loans portfolios. For example, if a bank has mostly short term deposits but long term loans, it will not be able to raise the interest on its pre-committed long term loans but will be forced to pay higher interest rates on all of its deposits once they mature. In the interim period, the bank can become insolvent. Precisely this process is cited as having contributed to the large scale bankruptcy of the Savings and Loan institutions in the USA over 1980s following the sharp increase in interest rates during 1980 to 1982, although, in this case the interest rates rose primarily due to a highly contractionary monetary policy"'.

Some or all of the effects mentioned above can act simultaneously and add up to bank insolvencies or accumulation of non-performing loans, which leads to the financial crisis. The loan recovery problems are further exacerbated if the economy goes into a recession. This is so because the difficulties faced by enterprises in dealing with sudden increases in interest rates and the risk of failure of an investment project increase significantly if the

general economy goes into a recession. Table 7 shows that virtually all the countries experiencing financial crisis also experienced a recession for a few years prior to the financial crisis.

A recession can occur due to the sharp increase in interest rates following financial liberalization and the resulting fall in investment. In addition, financial liberalization is typically accompanied by other policies such as trade liberalization, macroeconomic stabilization, and increased international capital mobility. While these policies are desirable in the long run, they can exacerbate the difficulties created by rapid financial liberalization in the short run if they do lead to a recession or the build up of excessive foreign debt. Interaction between financial liberalization, financial crisis and other policies is discussed next.

4.3 Financial Crisis: Interaction with Trade Liberalization, Macroeconomic Stabilization and International Capital Mobility

Trade liberalization exposes domestic firms to competition from foreign firms and can lead to a recession as domestic industry adjusts and restructures itself to the new competition and some of the less efficient domestic firms get weeded out. The process is likely to be more difficult where the levels of protection had been high and the protection is then withdrawn rapidly without giving the fiis adequate time to adjust to the increased international competition. This was the case with the Latin American countries and as a result, they went through a severe recession and financial crisis. On the other hand, Korea, and Malaysia, liberalized their financial markets after the trade liberalization was over. Thus they experienced relatively minor recessions and financial crises. Even Indonesia, which liberalized its financial markets a few years before it liberalized international trade, experienced a relatively mild recession and financial crises. Again, this is consistent with the hypothesis that a recession caused by other policy measures acts to exacerbate the severity of the financial crisis.

Macroeconomic stabilization measures usually take the form of either reduction in government spending to reduce budget deficit or a reduction in the growth of money supply to reduce inflation. Both of these measures lead to a recession and thus increase the severity of the financial crises. This was the case with the Latin American countries, Turkey,

Philippines, and USA. On the other hand, Australia, Korea. and Malaysia did not have to go through a significant macroeconomic stabilization program and this contributed to the relatively milder financial crises there.

Relaxation of restrictions on international capital mobility, in countries where they existed, has often accompanied financial liberalization. When international capital mobility is permitted, the high interest rates following financial liberalization lead to a large increase in foreign borrowing and thus a faster accumulation of foreign debt. As can be seen from Figure 6A and 6B, this happened in virtually all the countries except Korea, which had maintained interest rate ceilings during the liberalization, arid Phillipines. which was denied international credit during 1983-85 due to a major political and economic crises. The debt build up was particularly strong in Latin America, which allowed domestic banks to accept deposits" from foreigners and had very high nominal interest rates along with a controlled exchange rate, providing very high returns to foreign depositors. In the Latin American countries, the large foreign capital inflows not only earned extremely high returns, but also made the domestic currency too strong which hurt the export effort and led to current account deficits. It also created too much liquidity in the economy which led to increased domestic inflation. Even worse, this foreign capital was lent out to domestic private and public firms by the domestic banks whose liabilities were explicitly or implicitly guaranteed by the domestic government. Thus, when the domestic borrowers failed to repay their loans, huge public external debts were built up whose repayment have proved to be exnemely difficult.

To summarize, the above analysis suggests that interest rate deregulation should be undertaken after macroeconomic stabilization has been achieved. Trade liberalization should not accompany financial liberalization'*; financial liberalization should follow after the economy has adjusted to trade liberalization or vice versa. Restrictions on international capital mobility should be removed after the interest rate deregulation has been completed and domestic interest rates have settled down to reasonable levels.

5. IMPLICATIONS FOR INDIA: DEREGULATING THE **BANKING SECTOR** SAFELY

From the above discussion, it is clear that the financial crisis that has followed banking deregulation in most countries is a result of the various economic incentives

unleashed by the deregulation process. The proponents of the liberalization had expected the financial markets to move smoothly towards the long run equilibrium interest rate and improve the amount and productivity of investment. While their analysis is largely correct in the long run, the short run turbulence had not been anticipated and has proved too difficult *to traverse for most counties, causing* many *of them to abandon the* entire *liberalization* attempt.

The analysis developed in Section 4, suggests ways to minimize the short run turbulence in the financial markets following deregulation. This can be achieved by liberalizing the controls on interest rates and credit allocation *gradually* over a few years. For example, if ceilings exist on interest rates, it is safer to raise the *ceilings* to near market rates gradually over a few years before deregulating interest rates completely. Similarly, it is safer to gradually ease credit **controls** rather thsn removing them in one go. Further, it is safer to *undertake* financial liberalization after macrocconomic stabilization, especially a moderate inflation rate, has been achieved.

The financial liberalization initiated in India is moderate and gradual. The credit controls *on housing and shares* remain unchanged[13]. *Interest rates on deposits of different* maturities were liberalized in 1993 but a ceiling has been maintained (currently fixed at 11% while the inflation rate is about **!0%** per year). The interest rates on loans for various maturities and categories were liberalized in late 1994; however the minimum lending rate (currently 16%, except for small loans of under Rs 200,000) is still prescribed by the Reserve Bank. Thus interest rates have not been truly liberalized yet. Further, control of both the deposit rates and prime lending rate restricts competition among banks and provides them with a spread (between lending and deposit rates> which seems to be too large.

India is well placed to undertake further liberalization of the financial markets without any undue fear that it may lead to a financial crisis. This is so because India has a moderate inflation rate of around 10 percent, no serious macroeconomic stabilization problems and trade liberalization *has been* **mostly** *negotiated. Partial relaxation of controls on some types* of foreign capital inflows have led to significant inflows of foreign equity capita1 which have resulted in *a* higher-than-usual expansion of the money supply, **and** thus, easy credit conditions. Nevertheless, rather than liberalizing fully, it would be safer to raise the; real deposit rate ceiling while lowering the real lending rate floor gradually, say by one percent

per year, until the ceilings are no longer binding. Similarly, the ceilings on loans for personal housing and against shares as collateral can be raised gradually.

A major limitation of the deregulation of banking in India is the heavy dominance of the public sector banks which are used to working in a highly regulated environment. To improve the efficiency of operations and customer service, greater competition from private sector banks is badly needed. Private banks should be set up in larger numbers than has happened so far, indicating that they need more encouragement from the government. Furthermore, the public sector banks should be made more accountable by selling their equity to the public[14] .There is also a need for greater autonomy of public sector banks and greater accountability of bank managers to the performance of their banks.

The priority sector lending has been improved significantly by reducing interest rate subsidies and laying greater emphasis on lending along commercial lines to reduce non-performing loans. This emphasis should be continued by making interest rates on priority sector loans identical to those on non-priority sector loans and taking adequate safeguards against default. Only in cases of small loans to the weakest sections of the society should lending without a collateral be considered; in that case also other mechanisms for ensuring repayment of the loan need to be created, as for example, in the "group lending scheme" of the rural banks in Bangladesh. These changes would reduce incentives to cheat to qualify for priority sector lending and reduce the misuse and diversion of such loans. Thereby,. the availability of credit to the genuine priority sector borrowers would improve. And it is really the availability of credit, rather than its concessional aspect, that is important to the genuine priority sector borrowers. The elimination of concessional interest rates on priority sector loans has been used successfully by several developing countries, like Korea, Singapore, and Indonesia. It also reduces the burden of cross-subsidy on the non-priority sectors.

Another refinement in the priority sector lending can be to set the loan quota for priority lending, including quotas for its various sub-categories like agriculture and small scale industries, for the banking system as a whole rather than for each individual bank. This will not affect the interest of the priority sector borrowers but can improve the efficiency of priority sector lending through one of the following mechanisms:

(i) Banks can be allowed to trade the priority sector lending liability among themselves.

This trading arrangement will encourage cost reducing specialization. For example, one bank may specialize in lending IO the small scale industry, another to agriculture, a **third** to exporting industries, etc. It will also allow some banks, like the foreign banks and the newly emerging private banks, to not be involved in some types of priority sector lending if they so choose. But because such banks will have to 'buy' their lending obligation from other banks at a price, a level playing field will exist among them while reducing their costs.

(ii) Alternatively, the Reserve Bank can offer preferential' treatment of priority loans in the form of a reduced cash reserve requirement or a rediscounting facility. The extent of preference could be varied to attain the desired level of priority lending. It could also be varied across various sub-categories within the priority sector depending upon the relative burden different categories impose: for example, greater preferential treatment for smaller loans since they involve a greater administrative cost. Such an approach is superior to the present quota approach which encourages loans to the largest enterprises meeting the priority sector requirements because they involve the least administrative and risk costs for the banks.

While carrying on banking deregulation, the supervision of banks should be increased and banks required to maintain adequate loans-loss provisions and capital to loan ratios". The Central Bank should ensure that the riskiness of the banks' loan portfolio is commensurate **with** its loan-loss provisions. Fortunately, steps in this direction have been initiated in India recently as a result of a major bank scam detected in April 1992.

6. CONCLUSIONS

This paper analyzed the incentives created by the various policies of regulation and deregulation of the banking sector. The main findings are as follows:

Most of the regulations imposed on banks since 1969 have had undesirable effects. For example, restrictions on cntry and expansion of private and foreign **banks, and lack of** competition among public banks, (with uniform interest rates, spreads, and service charges among nationalized banks being enforced by the Reserve Bank), have led to a steady decline in the efficiency, work culture and the quality of customer service at the banks. Excessively large amount of subsidized borrowing hy the government has raised interest costs for other sectors and thus discouraged private investment. Similarly, directed lending to 'priority

sectors' at concessional rates of interest artificially swelled demand for such loans, some of it from fake borrowers. Ceilings on interest rates have created credit shortages leading to corruption in the sanctioning of loans.

At the same time, rapid and uncontrolled banking deregulation is not advisable. It has often led to very high real interest rates, and eventually financial crises, in many countries. Financial liberalization should be undertaken after macroeconomic stabilization has been achieved. Trade liberalization should not accompany financial liberalization; financial liberalization should follow after the economy has adjusted to trade liberalization or vice versa. Restrictions on international capital mobility should be removed after the interest rate deregulation has been completed and domestic interest rates have settled down to reasonable levels. Thus, a controlled and gradual approach to deregulation would be safer and more likely to yield beneficial results.

Given thnt trade liberalization has been largely negotiated and inflation rate is moderate, India has the right conditions to undertake further gradual liberalization without much risk of a financial crisis.

Endnotes:

1. Public banks refers to the banks nationalized since 1969 plus the State Bank of India group of banks which have always been owned by the government.
2. Based on private interviews with Mr. Kishore Chauker, Industrial Credit and Investment Corporation of India (ICICI) and several managers in the nationalized banks.
3. See, for example, Sandesaria (1988).
4. See the World Bank, 1989, and Cho and Khatkhate, 1989.
5. See Odagiri, H. and H. Yamawaki, 1990.
6. Note that the demand for credit for consumer durables, housing and shares is demand for a certain "stock" of credit and it can be very large For example, if each resident wanted to borrow his/hers half a year's income for such loans, the total demand for loans would exceed the total amount of loanable funds available with the banks in most developing countries since they typically have the M2/GDP ratio of less than 0.5.
7. Real share price index equals share price index divided by the consumer price index
8. The share price rise in Philippines seems to have been delayed until I985 because of the great political uncertainty and turmoil in the last two years (1983-85) of President Marcos' presidency, which would have restrained many investors from investing in the share markets.
9. **Also** see Stiglitz and Weiss (1981) and Cho (I 986).
10. See, for example, Silverberg (1990) and World Bank (1989).
11. **Some** other forms of foreign capital inflows, such as foreign direct investment and allowing domestic firms to sell bonds and shares in the international capital markets, are not so costly. Countries, such as Korea and Malaysia, which have mostly used these forms of foreign capital inflows have not suffered on this account. See Agrawal (1994) for a detailed discussion of the relative merits of various forms of foreign capital inflows.
12. However, it should be possible to gradually raise interest rates ceilings to yield interest rates close to the market levels.
13. Housing loans are allowed only for personal dwellings and are subject to modest ceilings. Loans taken against shares as collateral are also subject to a ceiling of Rs 500,000 (loans for the purchase of shares are not allowed).
14. When selling bank equity to the public, a low ceiling on voting power of any individual shareholder should be maintained to minimize the take over of banks by major industrial houses which may be undesirable (see Agrawal 1992). It will create excessive concentration of economic power in a few hands and create excessive risk since such banks may lend mostly to firms belonging to the industrial group.
15. The Bureau of International standards (BIS) recommends an 8 per cent capital to loan ratio).

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Table 1: **Deposits** and Advances of Scheduled Commercial Banks *in* India 1989-93

	1988439	1989-90	1990-91	1991-92	1992-93
Aggregate Deposits	140150	166959	192541	230758	267147
Net Bank Credit	79234	95132	109298	117443	142149
Credit-Deposit Ratio	.565	.570	.568	.509	.532
Sectoral deployment of Credit (% of net Bank Credit)					
	1989	1990	1991	1992	1993
LA Priority Sector Credit	432	42.4	39.3	38.7	35.0
i. Agriculture	17.6	17.4	15.3	IS.5	14.0
ii. Small-scale Industries	16.6	16.30	15.7	15.5	14.0
iii. Other Priority Sector	3.0	8.7	8.3	7.7	7.0
LB Export Credit	7.8	8.7	8.4	8.8	10.8
I.C Public Food Procurement Credit	0.97	2.11	4.12	3.98	4.74
TOTAL DIRECTED CREDIT (IA+IB+IC)	52	53.2	51.8	51.5	50.5
II.A INDUSTRY (Medium & Large)	40.6	40.2	40.7	40.1	412
II.B WHOLESALE TRADE	6.0	5.8	5.4	5.2	4.9

Source: Reserve Bank of India Bulletin. various years.

Table 2: Fiscal Deficit and Pre-emption of Resources

Year	Fiscal Deficit (Central Government)	Marginal Preemption (as on March 31, in per cent)		
		CRR	SLR	Total
1980-81	6.2	6	34@	40
1981-82	5.4	7.75	35@	42.75
1982-83	6.0	7	35@	42
1983-84	6.3	19	35@	54
1984-85	7.5	19*	36	55*
1985-86	8.3	19*	37	56*
1986-87	9.0	19.5*	37	56.5*
1987-88	8.1	20	38	58
1988-89	7.8	21*	38	59*
1989-90	7.8	15	38	53
1990-91	8.4	15	38.5	53.5
1991-92	6.0	25	38.5	63.5

Source: Economic Survey, 1992-93 and RBI. Reproduced from Ministry of Finance (1993)

* In these years. the relase of previously impounded balances implies a slightly lower marginal pre-emption than the face value shown here.

@ On gross Demand and Time Liabilities

Table 3: Selected Interest Rates in India, 1970.1993

Year	Deposit Rate (3 to 5 years)	Lending Rate				Inflation Rate'
		General	Term Lending. by Dev. Finance Institutions	Small Scale Industry	Exporters	
1970-71	7.0	8.5-12.0	8.5	7.0-8.5		5.24%
1975-76	9.0	15.5	11.0	8.0-l 1.0	11.5	-1.09%
1980-81	10.0	19.5	11.9-14	12.5-14.5	11.9-14	17.7%
1985-86	10.0	17.5	14	11.5-16.5	12.0-16.5	4.41%
1990-91	11.0	16.4 (min)	14	11.5-16.5	7.5-15.5	-9.3%
1991-92	13.0	17-20(")	18-20	7-15.5	15-24	13.74%
1992-93	12.0	17-19(")			14-23	7.0%
1993-94	11.0	16.0 (")			11 (min)	

• Inflation Rate for the following year: Inflation $Rate_t = \{\{CPI_{t+1} - CPI_t\} / CPI_t\} \times 100$

Source: Basic Statistics Relating to the Indian Economy. August 1993. Centre for Monitoring Indian Economy.

TABLE 4: CREDIT TO CENTRAL GOVERNMENT AS PERCENTAGE OF TOTAL DOMESTIC CREDIT

YEAR	INDIA	INDONESIA	KOREA	MALAYSIA	THAILAND
1980	42.6	-51.1	i.8	2.5	24.7
1881	43.0	-81.5	11.0	9.2	25.9
1982	42.9	-61.6	10.9	12.6	28.5
1983	42.4	-44.6	9.6	9.9	24.2
1984	42.5	-67.0	8.9	9.4	24.0
1985	44.4	-61.4	8.2	3.1	22.5
1986	45.2	-42.0	8.0	4.8	23.3
1987	46.6	-23.9	5.3	8.2	20.1
1988	46.6	- 17.6	2.6	6.1	12.7
1989	46.7	-14.8	0.5	6.1	5.7
1990	47.9	-12.5	-0.4	4.3	1.1
1991	49.9	-11.1	1.5	1.7	-4.9
1992	47.3	-12.4	1.7	3.8	-7.1
AVERAGE	45.2	-38.6	5.8	6.3	15.4

SOURCE: INTERNATIONAL MONETARY FUND, INTERNATIONAL FINANCIAL STATISTICS YEARBOOK 199 1 & JULY 1994

Table 5: Ex-Post **Real@** Interest Rates on Short-Term Loans in Countries Experiencing Financial Liberalization and Crisis

COUNTRIES	1975	1976	1977	1978	1979	1580	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Latin American Countries																	
ARGENTINA		-69.64	L 74.64	-11.25	-11.57	-3.10	32.50	C		25.97	563 16	-10.18	-22.53	-83.33			
CHILE	L 16.0	64.3	87.88	39.56	19.97	22%	38.26 C	28.78	19.15 C	5.84	8.29	8.22	20.57	3.54	7.84	22.23	11.21
URUGUAY		L 2.57	22.03	2.61	2.83	24.28	4.80	6.23 C	24.68	6.37	10.33	19.03	20.72	,194	141.88	-3912	50.12
East Asian Countries																	
ENDONESIA			0.69	-6.13	-7.64	-2.89	-0.45	-2.48	L -1.39	6 %	5.76	11.30	12.61	14.66	13.27 C		
KOREA	0.16	5.26	1.58	-1.13	-7.91	-283	L 9.63	8.05	7.52	7.36	7.00	6.78	2.63 C	4.22	2.50		
MALAYSIA		3.54	2.92	3.71	0.77	-1.77	L 2.53	4.90	6.92	10.96	10.72	9.84 C	6.11	4.31	4.29	2.64	
PHILIPPINES	2.59	1.91	4.34	-4.70	-3.56	0.32	4.63	7.36	L 20.69	4.13	7765	13.24	4.21 C	4.82	3.85	1.74	13.01
Other Countries																	
AUSTRALIA	-1.80	-1.66	2.40	1.22	0.00	0.11	1.60	4.M	L 9.66	7.25	6.29	10.33	11.71	10.18	13.46	16.51 C	
NEW ZEALAND			-3.52	-3.49	-5.88	- 2 u	-2.33	1.93	7.26	L -2.55			13.56	'0.69	1.10	11.44 c	
TURKEY				-27.19	'3.98	L -7.84	3.41	3.54 c	-8.68	5.11	14.84 C	9.91					
USA	2.01	0.33	-0.76	-2.00	-0.73	L 4.49	11.98	11.27	6.21 C	8.19	1.92	4.44	4.04	4.29	5.24	13.50	6.65

Notes:

@ *Ex-Post Red* Interest$_t$ = [( ] + Nominal Interest$_t$)(CPI$_{t+1}$/CPI$_t$) - 1]

L Indicates the year of Liberalization of interest rates on short-term loans (one year and shorter maturity).

C Indicates the year when major problems Of loan default emerged (based primarily on information in World Bank, 1989, Chapter 5, World Bank, 1993, and Cho and Khatkhate, 1989)

Sources: International Monetary Fund, Intemation Financial Statistics Yearbook 1992, Washington D.C., U.S.A.
Cho and *Khatkhate* (1989)
McKinnon (1988) for Chile 1973-76

Table 6: Inflation Rate and the **Spread** between lending and deposit interest rates, 1976 • 1988'

Countries	Average Inflation rate (per cent)	Average @ Spread
A. Counties with Hyper Inflation (above 100%)		
1. Argentina	473	248
2. Brazil	256	80
3. Israel'	132	146
Average	287	158
B. Countries with High Inflation (Between 20% and 100%)		
1 . Chile	29.1	119.2
2. Uruguay	55.5	225
3. Mexico	58.2	6.4
4. Turkey	50.2	4.3
Average	48.2	13.1
C. Countries with Low Inflation (less then 5%)		
1. Japan	32	3.4
2. Germany	3.9	4.9
3. Singapore	3.1	2.7
4. Switzerland	3.0	1.1
Average	3.3	3.0

* Fur some countries for which *data* for some years was not available, *the avenge is over* a *subset of these* years.

@ Simple Arithmatic Average of the yearly numbers

Source: IMF, International Financial Statistics, 1991

Table 7 : GDP Growth Rates in Countries Experiencing Financial Liberalisation and Crisis

COUNTRIES	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Latin American Countries																	
ARGENTINA	-0.7	-0.2	L 6.2	-3.3	7.3	1.5	-5.7	-3.1 C	3.7	1.8	-6.6	7.3	2.6	-1.9	-6.2	0.1	8.9
CHILE	L -12.9	3.5	9.9	8.2	8.3	7.8	5.5 C	-14.1	-0.7 C	6.4	2.5	5.6	5.7	7.4	10.0	2.1	6.0
URUGUAY	5.9	L 4.0	1.2	5.3	6.2	6.0	1.9	-9.4	-5.9 C	-1.1	1.5	8.9	7.9		1.3	0.9	2.9
East Asian Countries																	
INDONESIA	5.0	6.9	8.8	7.8	6.3	9.9	7.9	2.2	L 4.2	7.0	2.5	5.9	4.9	0.5	13.1 C	7.1	6.6
KOREA	7.1	12.9	10.1	9.7	7.6	-2.2	L 6.7	7.3	11.8	9.4	5.9	12.4	12.0 C	11.5	6.2	9.2	8.5
MALAYSIA	0.8	11.6	7.8	6.7	9.3	7.4	L 6.9	5.9	6.3	7.8	-1.0	1.0 C	5.4	8.9	8.7	9.8	
PHILIPPINES	6.4	8.0	6.1	5.5	6.3	5.2	3.2	3.6	L 1.9	-7.6	-7.4	3.4	4.8 C	6.3	6.0	2.7	-0.7
Other Countries																	
AUSTRALIA	2.2	3.3	1.0	3.2	4.8	2.3	3.6	-0.5	L 1.0	7.4	6.5	1.8	4.6	4.5	4.4	1.2 C	-1.1
NEW ZEALAND	1.7	0.1	-2.7	-0.3	2.6	1.1	4.9	2.5	4.6	L 5.2	-1.0	3.3	-0.8	1.2	-1.0	0.2 C	-2.0
TURKEY	8.0	8.1	3.6	3.0	-0.3	L -1.1	4.1	4.6 C	3.3	6.0	5.1 C	8.1	7.4	3.8	4.9	9.1	
USA	-1.1	5.1	4.6	4.8	2.8	L -0.5	1.6	-2.3	3.8 C	6.0	2.9	2.8	3.0	4.0	2.4	1.1	-1.2

Notes:

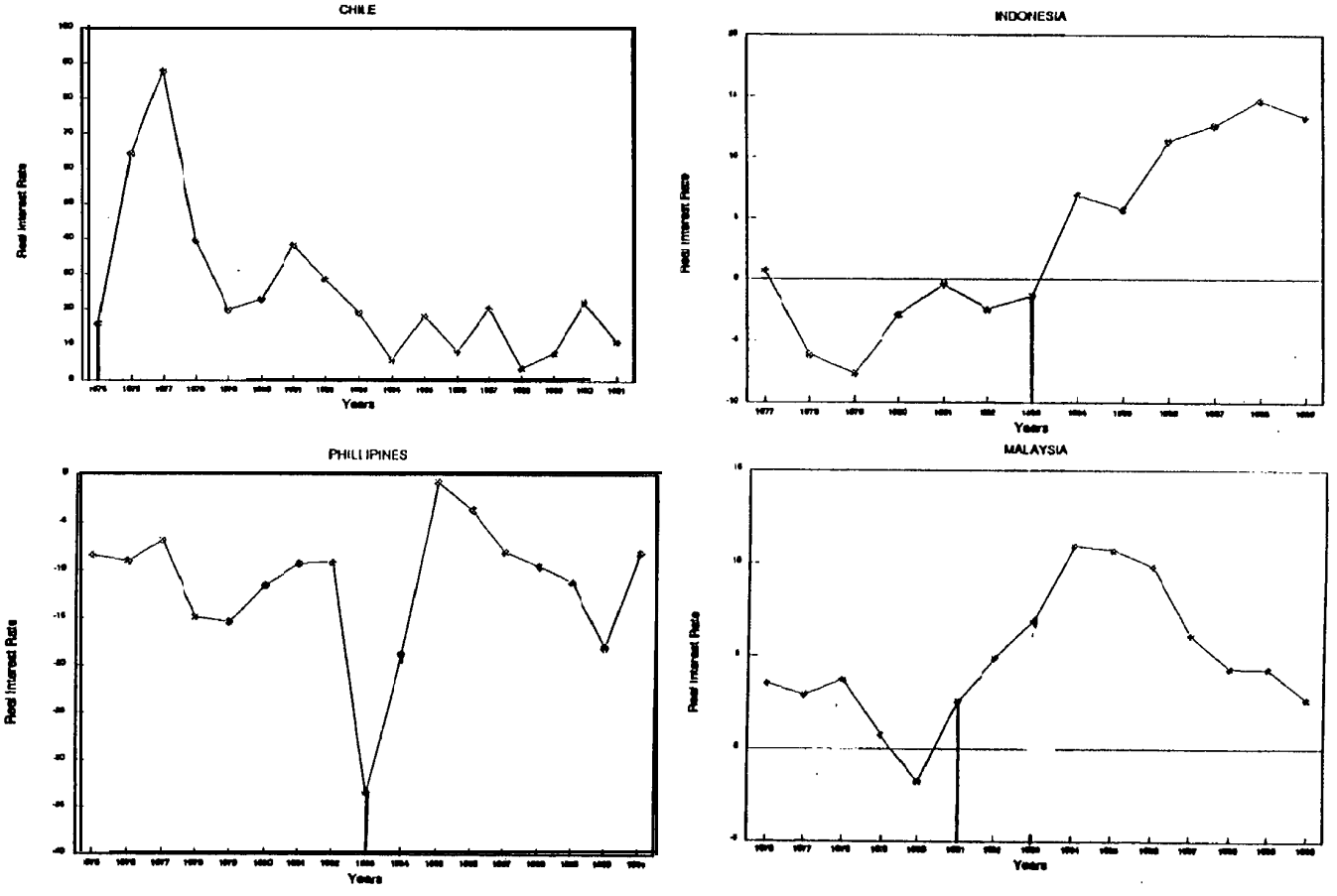
L Indicates the year of Liberalization of interest rate on short term loans.

C Indicates the year when major problems of loan default emerged (See the World Bank, 1989, Chapter 5, World Bank, 1993, and Cho and Khatkhate (1989)

Sources:

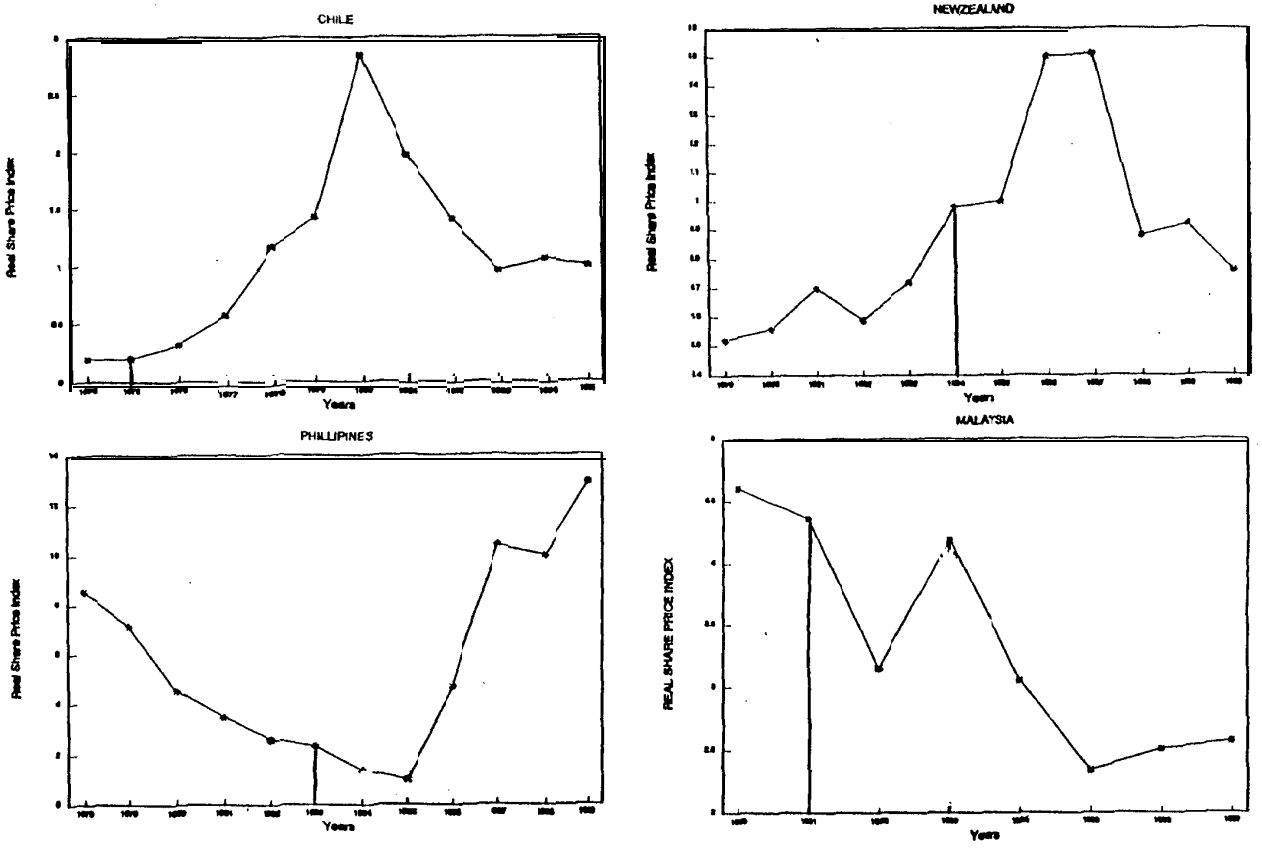
International Monetary Fund, International Financial Statistics Yearbook 1992, Washington D.C., U.S.A.

Fig 4a : Pattern of Real Interest Rates



Note: The vertical line in the graph denotes the year of interest rate deregulation for the concerned country.
Source: Table 1

Fig 5 : Pattern of Real Share Prices



Note: The vertical line denotes the year of interest rate deregulation for the concerned country.
Source: Based on data from IFC, Emerging Capital Markets Factbook, 1990,1993

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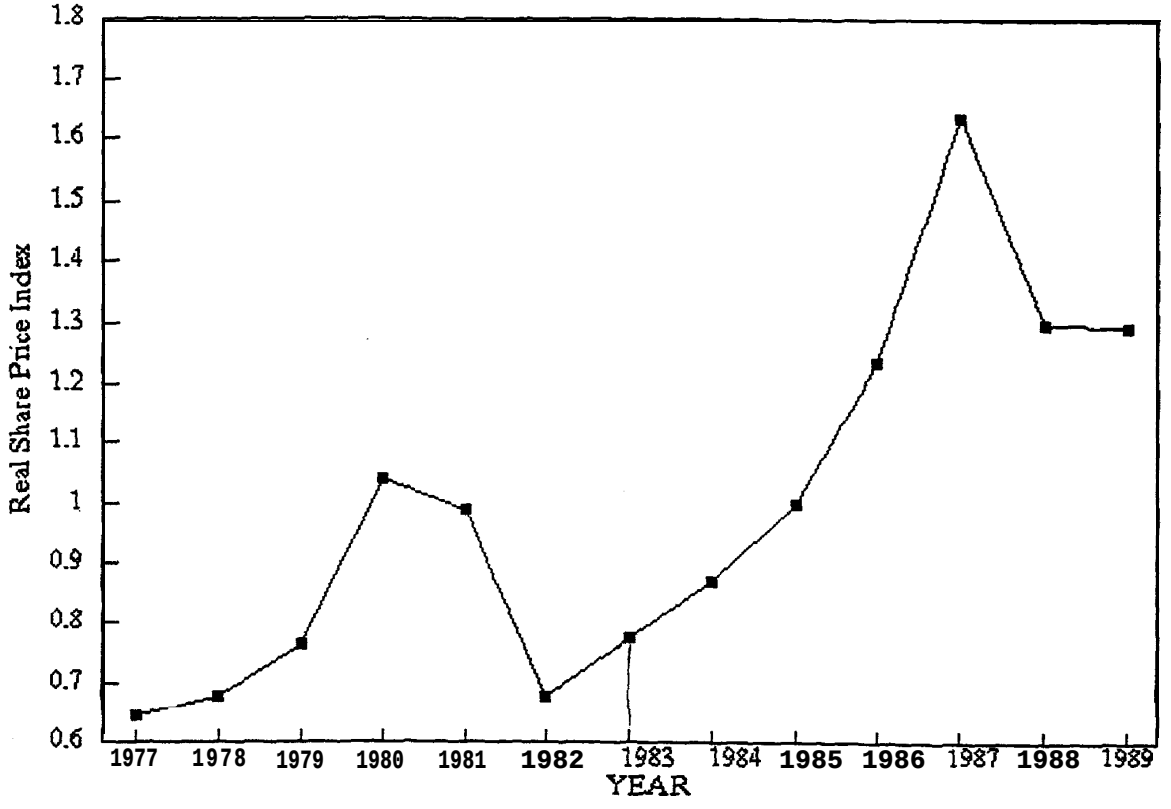

Real Share Price Index
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
YEAR

Figure 6A: Evolution of Total External Debt In Latin American Countries

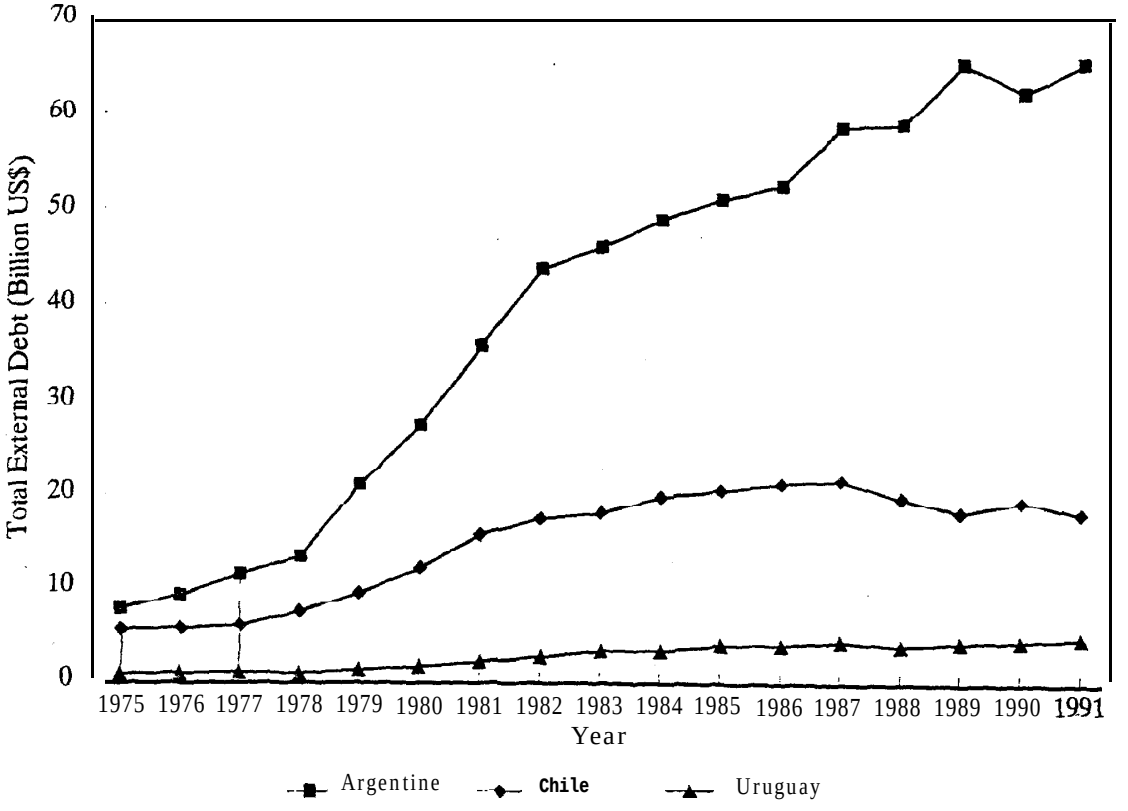
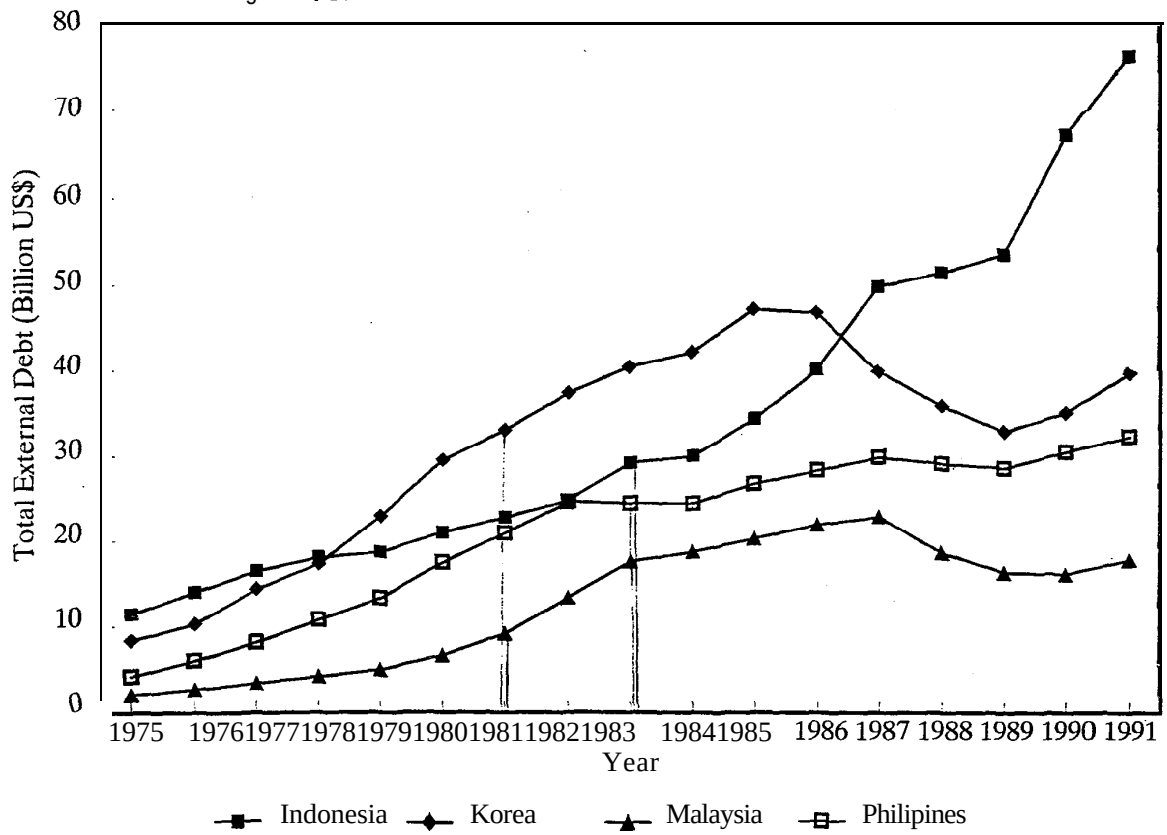


Figure 6B: Evolution of Total External Debt In East Asian Countries



Note: The **vertical** line denotes the **year of liberalization** of the interest rates for the **concerned** country.
Source; **Based on** data from **the World** Bank, **World** Debt **Tables,** 1994.